Preadolescents and adolescents' relationship with food and food quality

by

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1. Introduction.

This work reports the results of a survey on the perception of food quality Grunert, 2005] by 11- 18 year old preadolescents and adolescents, residing in the Piedmont region (Italy). The research is organized in two phases: the first phase comprises a qualitative investigation using semi-structured interviews with 122 subjects; the second phase comprises a quantitative survey, conducted with a structured questionnaire completed by 1203 subjects.[1]

The study aimed to investigate the relationships of young people with food and their perception of food quality to provide interested schools and local governments with educational strategies they could implement to promote best dietary practices [Martinengo, 2012].

In contemporary advanced industrial societies food quality is a relevant theme for various reasons: there is growing interest in health and prevention, especially in relation to the costs to the National healthcare systems.

In industrialized countries, the number of people suffering from food disorders such as anorexia and bulimia continues to grow, while the ages of onset have shifted downward to younger and younger children. Generally speaking, healthcare institutions have warned that unhealthy dietary practices are associated with an increase in numerous diseases, including dyslipidemia, diabetes, cardiovascular disease.

[1] The research was promoted and financed by the Piedmont Region and was carried out between autumn of 2011 and spring 2012.

The prevailing orientation towards industrialized fast food like Mac Donalds, as well diets heavy in proteins, sugars and fat are also to blame. Raising awareness of food quality and translating it into daily diet practices may change lifestyles even amongst the youngest, and result in concrete prevention.

The second reason consists in a trend regarding consumption which began in the final decades of the 1900s and can be summed up in ecological issues and the return to tradition. In terms of food, the trend reflects the growing consideration for agricultural and food preparation methods which respect biodiversity, the refusal of MacDonalization of food and the growing popularity of slow food which focuses on the physical environment, the defence and appreciation of local products and a diet based on traditional food and dishes [Petrini, 2005, Poulain, 1997].

The third reason is a progressively higher perception of the risks associated with food intake. These risks are related to agriculture techniques and the preparation of food, but also include risks related to consumption and tied to the effects diet and food patterns have on health [Lupton]. In the social construction of risks [Giddens, 1990, Beck, 1986] the mass media play a central role, highlighting and propagating the idea of food related risks and generate, to a large extent, a heightened perception of the risks themselves [Douglas, 1992, Douglas and Wildavski, 1982].

In the "risk society", risks stemming from the food industry assume a relatively consistent weight and damage trust in producers, distributers and the institutions entrusted with the task of protecting the consumer. There is an increasing need for people to feel they can trust their own knowledge and choose "good" food, or rather, know how to detect and identify the quality of food, even when this means accepting the greater risk of relying on knowledge from expert systems.

Young people today, children included, are the natural focus of educational strategies and projects to promote good eating practices based on know-how and information which will allow them to assess the good and bad quality of food. For this reason many institutions, including local governments, schools, and state health ministries, support different forms of interventions for good eating practices aimed at young people, from advertising to specifically targeted educational projects. Projects in nutrition education are important not only for prevention but for innovation as well, since the youth of today are the adults of tomorrow, many of whom will be parents and models of consumption for future generations.

This work will deal with three themes which represent a part of the investigation: eating patterns of Piedmontese youth and their relationships with food, the perception of risks associated with food and the criteria they use to assess food quality.

2. Daily food

The semi-structured interview used for the qualitative research asked for a description of meals taken the Sunday and the day before the survey, in order to obtain an accurate "photograph" of the food intake.

Over half of the Piedmontese youth said they preferred salty foods to sweet foods and they did not like bitter foods; in addition, only about a fourth of the interviewees said they liked all vegetables, while more than half claimed they liked only some of them.

This is reflected in the menu of the two main meals: pasta and red meat were the most frequently included foods, while salad, the other vegetables and fruit were almost as popular. The quantitative survey confirmed these data, showing that some foods, on average, are eaten habitually and almost daily (pasta, milk, yogurt, fruit and vegetables) while others, like fish, eggs and rice are eaten just over once a week. (Tab.1)

Tab. 1. Foods eaten over a week

Food	mean
Fruit	4.49
Salad	3.42
Other vegetables	4.22
Legumes	2.43
Pasta	4.91
Rice	2.79
Cheese	3.57
Milk and yogurt	4.59
Red meat	3.77
White meat	3.71
Cold cuts and sausages	3.39
Eggs	2.68
Fish	2.52

Because the consumption of only selected foods was examined, an accurate comparison with the Italian Food Pyramid from the Italian Department of Health cannot be made. However, the survey did establish that Piedmontese youth have an excessive protein intake which includes too much red and white meat.

The most popular drink for lunch and dinner is mineral water, usually still, drunk by almost two thirds of the interviewees. The other drinks are residual, with the exception of Coca Cola which is drunk, at lunch and dinner, by about 15% of the young people interviewed.

One of the stereotype eating habits attributed to preadolescents and adolescents is the widespread intake of snacks and the hyperconsumption of sweet and salty products like prepackaged baked goods, crisps, crackers and other fat and energy dense foods.

The survey of young people living in Piedmont reveals something very different.

To begin with, meal fragmentation is not widespread and daily food intake is not distributed over many different meals: only one fifth of the interviewees eats snacks outside of the six meals which include breakfast, a mid-morning snack, lunch, an afternoon snack and dinner, showing orderly eating patterns. In the second place, food intake is concentrated over a smaller number of meals, considering that almost half the people interviewed do not eat a mid morning or afternoon snack. Moreover, almost a sixth of the young people do not eat breakfast, mirroring eating patterns of the adult Italian population for that meal. Finally, the interviewees' answers reveal that snacks typically associated with this age group are not the most popular ones: at mid morning more than a third of the young people eat sandwiches, pizza, focaccia, breadsticks and tarallos (round breadsticks) and just under a fourth eat pre-packaged baked goods and salty snacks, while in the mid afternoon over a third allow themselves an ice cream or biscuits and a tenth eat chocolate or chocolate snacks.

In conclusion, young people in Piedmont seem to share the food culture of their age group but are solidly tied to the traditional customs and practices which provide for orderly meals and non excessive consumption of snacks and pre-packaged baked goods. The process of meal destructuration that is affecting the adult population does not seem to have affected the age group surveyed yet, because many young people, especially preadolescents, eat meals offered by school canteens and because most families continue to eat together, especially at dinner. Piedmontese youth state, in fact, that they eat dinner with their family in 90% of the cases and two thirds of those interviewed also eat Sunday lunch together, often with grandparents and other relatives as well.

Young people in Piedmont seem to have inherited family models and the convivial, emotional, identitary meanings of meals [Douglas, 1971, Barthes,1961, Harris, 1985]. Indeed, over half of the interviewees said their favourite place to eat meals is at home and almost everyone stated that they prefer eating with others.

In addition to the convivial family model, Piedmontese families seem to have passed down their traditional Italian food basket. A fourth of the interviewees marked pasta and pizza as their first choice for food, and sweets as well as meat were the second most popular choice. Only a small minority preferred street foods such as hamburgers, kebabs, arancini, sliced pizza, and focaccia.

The fact remains, however, that three quarters of young Piedmontese appreciate fast food and street food. These foods appeal to a third of the interviewees because they are fast to prepare and eat, and to a fourth for their taste. About a fourth of the interviewees do not want to eat fast food because they consider it harmful to their health and do not think street food tastes as good as the food made at home.

In conclusion, while young people in Piedmont do share in the youth food culture and play a part in the growing popularity of fast food and ethnic food, they have maintained strong ties to traditional Italian eating patterns. Thus, despite their appreciation for new foods and new ways to eat meals, they continue to choose homemade and typically Italian foods.

One final observation concerns the meanings food holds for young people. The interviews evinced a good relationship with food, and for most of them eating was an enjoyable experience. The reasons they found eating satisfying, however, were completely unrelated to the nutritional value of food, while sensory gratification and symbolic and emotional motivations such as relaxation and socialization prevailed [Fischler, 1990]. It follows, then, that the relationship with food is highly marked by hedonic characteristics that obscure the nutritional value as well as the ecological and ethical issues tied to food production.

3. A relationship of mere consumption.

The relationship young people in Piedmont have with food is prevalently focused on eating. They are only minimally involved in purchasing it or getting information on what they eat, and almost never participate in food preparation.

Only about half of those interviewed, and more girls than boys, do the food shopping with the family or family members. The frequency of buying food does not seem to translate into a widespread influence of young people's food preferences on what the family selects: while about a third of the interviewees said their requests for specific foods were always met, the large majority said that it happened only occasionally, which implicates clear and strong parental leadership over what their children eat.

Moreover, young people infrequently buy food themselves. The small amount of money spent on food shows how their food purchases are sporadic and insignificant. Over 50% spend less than 10 euros a week from their pocket money, while only a small minority spends over 20 euros. Clearly, however, they can use money from the family and they can influence food choices by asking family members doing the shopping for specific items. Yet, these choices are "negotiated" and dependent upon, at least partially, parental opinions.

Finally, survey data highlight how preadolescents and adolescents are almost totally removed from food preparation, which continues to be the mothers' responsibility. (Tab.2).

Tab. 2. Who usually cooks in the family.

	%
Mother	**68.6**
Father or other family member	**26.8**
Interviewee	**3.8**
Other	**0.8**

The results from the Piedmontese survey are in line with National data which show how, on an average day, these activities are carried out by 90.5% of the women employed outside the home and by 97.8% of unemployed women [ISTAT (National Statistical Institute), 2011].

The delegation of food responsibility, or rather, the control the family exercises over eating habits, affects the knowledge and information about what is eaten. In this case as well, young people entrust their parents with this task, as the data on their information enquiries and food label reading reveal.

The data show how the interviewees look for information on food sporadically and inconsistently and how less than half of the young people do not regularly seek information on the food they eat. (Tab. 3).

Tab. 3. Seeking information on food.

	%
Never and occasionally	**76.5**
Often and very often	**19.9**
Missing	**3.6**

A survey conducted by the American Adolescent Health Program found that adolescents had very little interest in modifying their diet to improve their health and nutrition. The barriers to changing their dietary behaviours were indicated as the lack of time, the lack of discipline and the lack of a sense of urgency. The survey showed how good food practices in terms of health and well-being are behaviours which can be put off to later. For this age group a healthy diet is not urgent and can be postponed until later in life when they feel the need for healthier eating habits [Story and Resnick, 1986].

It could be hypothesized that such an attitude is more typical of the age than the context, and that it is one of the factors for the scarce perception of the need to be well informed about what you eat. If the problem of healthy eating can be put off until later in life, then being aware of what you eat and why becomes important only later as well.

A particular interest has stimulated the analysis of the channels the young Piedmontese use and consider valid for obtaining food information, and in particular the hierarchical order in which these channels occur.

Parents are in first place, experts (family physicians, doctors, pharmacists, teachers) are second, networks (interpersonal and virtual) are third and the media (TV, newspapers and magazines) fourth, while information channels related to the market (advertising, product testimonials) receive low credibility ratings. This datum corroborates the delegation mentioned earlier and the non-involvement in anything outside of mere food intake.

Further information on the young people's attitudes to food properties is offered by data on how often labels and the information on them are read. In this case, the answers make it possible to discuss young consumers' self sufficiency; even if the labels do not offer complete information about the food eaten, the reading of them demonstrates self-commitment, or rather, the tendency to be an active an independent consumer in assessing one's own diet.

Less than two thirds of the young Piedmontese read or read the labels sporadically, whereas one third of the interviewees read them regularly. However, further examination of the details read reveals a primarily pragmatic attitude, given that what interested them was the product's expiration date.

4. Risks associated with food.

The perception of risk in different fields is tied to the development of knowledge and the suspicion and contradictions which accompany it. When consumers know little about using the instruments which allow them to calculate probability, their perception of risk is more acute. In the same way, when the feeling of personal control is weak, the perception of danger is stronger [Slovic, 1993]. Information and knowledge of food can help consumers to decide how to eat and which foods are better than others, giving consumers the feeling that they can personally assess the quality of their food. Preadolescents and adolescents in Piedmont appear

to have little information and knowledge about basic food properties and the production methods they were asked to assess on the questionnaire. (Tab. 4).

Tab. 4. Information on food.

	true	false	Don't know
	%	%	%
It's important to eat meat every day	27.2	60.2	8.9
Cereals are rich in protein	44.0	28.0	24.3
It is important to avoid all types of fat in your diet	40.7	47.1	8.5
Beans are a cereal	5.0	79.5	11.4
Barley is a legume	16.3	63.0	16.4
Additives which can be present in food, are not harmful if used correctly	42.2	13.8	39.5
We can live without adding salt to food	53.1	26.7	15.9
Additives in food hide poor quality	28.7	25.0	42.2
Two organic trademarks and PDO mean the same thing and indicate where the food was produced.	13.5	37.0	44.8

The lack of knowledge and information heightened the perception of risks and forced young consumers to trust the family for decisions regarding food.

In literature, sociology's classification of risks includes a category for dangers associated with consumption and lifestyle. Food related risks are part of this group and this study has investigated young people's perception of some of these (Tab.5).

Tab. 5. Evaluation of some food risks.

	Run many risks	Run few risks	Don't know
	%	%	%
Pesticides used in agriculture	59.0	23.1	13.3
Harmful chemical substances in food	74.5	14.5	6.8
Development of microorganisms during food preparation	42.9	34.5	18.2
Use of low-quality or bad raw	65.6	20.3	9.8

materials			
Food fraud (declaring one thing on the label and selling another)	**49.9**	**26.3**	**18.9**

The data show how for young people in Piedmont the field of nutrition is a minefield of dangers and the risks they perceive the most are tied to chemistry and the negative consequences of artificial substances used in food agriculture. During the years of industrialization, science was seen as a friend, able to improve quality and quantity in the fields where it acted. More recently the image of science as "evil" and often "destructive" has taken its place.

To a lesser but still significant degree, the young people interviewed perceive the risks associate with bad policies in industry, which may use low quality or bad raw materials, or resort to food fraud.

Finally, the risk which worried them the least was tied to food preparation, including industrial preparation, handmade foods and home cooking.

5. Food quality

The choice of food is a complex function of preferences that combine sensory characteristics with the influence of non sensory factors including cultural traditions, expectations, attitudes, emotions, health objectives, price and ethical issues. The model of analysis adapted and used to analyse the perception of food quality is the Food Choice Questionnaire which includes 39 items that can refer to 9 properties of quality: health, moods, convenience (easy to find and prepare), sensory appeal, natural content, price, physical form, familiarity and ethics and environmental concerns [Steptoe, Pollard,Wardle, 1995].

Familiarity and sensory appeal were at the top of the Piedmontese youth's classification of quality factors and were followed by natural contents and health, price, weight control and ethical and environmental concerns, mood and convenience. (Tab. 6).

Tab. 6. Quality factors.

Factors	Mean on a scale 1-7
Sensory appeal	4.79
Familiarity	4.80
Health	4.41
Weight control	3.93
Natural contents	4.58
Price	4.03
Convenience	3.53
Ethical and environmental concerns	3.68
Mood	3.60

The following remarks on the differences among the Piedmontese young people in evaluating the quality factors will consider both health and the natural content of food since they are strongly related to each other.

One difference concerns gender. Sensory characteristics of food are equally as important to boys and girls, while health and natural content are more important to girls.

The second difference involves age. Secondary school students worry less about healthy and natural food than primary school students.

Although the other quality factors are less important, the differences are worth noting and are, for the most part, gender-based. The girls consider physical form and the mood altering effects of food more important than the boys, who pay more attention to cost, convenience and ethical and environmental aspects.

In any case, sensitivity to factors connected to ethics and environmental concerns increases most with greater family cultural capital. The more educated families seem to be able to

transmit a more attentive attitude to the aspects of food connected with production techniques, workers' rights, distribution and environmental consequences of the food chain.

Ethics and environmental concerns, on the other hand, seem to be inversely correlated to convenience.

The study also included two questions which asked the respondents to think about the food they eat and describe why that food could be defined "good" or "bad".

In both cases, taste, or rather, the flavour, scent, and palatibility are the reasons most people gave, showing how young people consider "good" or "bad" quality more a question of taste than any other quality of food. In other words, their idea of quality is based on the subjective characteristics of the food itself and, in particular, the consequent pleasure of the sensory experience. As for "good" quality, after taste, or rather "good taste", the other reasons given by numerous respondents included health and physical form: these two criteria together make up almost two thirds of all the answers, revealing how the other factors (natural content of food, price, ease of preparation and consumption, habits, low environmental impact and moods) are highly insignificant.

It goes without saying that the ease of preparation was chosen by few respondents because young people are not involved in the cooking. In the same way, few interviewees selected price since they spend very little money of their own on food. The marginality of environmental sustainability, on the other hand, confirms the previous discussion: "ecological" trends of consumption are not widespread among young people. Those who believe that young people are innovators and will propogate new environmental trends, would find a different story in the Piedmontese research. Although concern for the environment is growing, it still involves a minority of the population and a small minority of young people.

6. Conclusions

The research shows that preadolescent and adolescent relationships with food are strongly influenced by the family, which transmits its own food models to their children and, for the most part, manages to make the children respect them [Videon and Manning, 2003]. Families and the social groups they belong to formulate and transmit food patterns and criteria that guide the choice of foods, which the children in the age group considered in this investigation follow closely, confirming the mechanisms of cultural transmission [Bourdieu, 1979, Goody, 1982].

However, the population surveyed also showed how external influences affect food and the reasons they choose it. On the one hand, they are exposed to the food hybridization by fast food and ethnic food; on the other, they are influenced – particularly girls – by society's ideal of the body and beauty.

Hybridization represents a standard feature in food, and local cuisines have changed because of this phenomenon without, however, erasing their identity [Fischler, Courbeau]. The ideal of body and beauty that has always been present in history in diverse forms [marwick, Eco], today, thanks to the means which propose and impose it, may influence the factors determining food choice and the assessment of its quality, leading to consequences such as the eating disorders mentioned in paragraph 1.

Some features of these two aspects may be present in family eating habits as well, and therefore, we do not want to set the "good" eating pattern of the primary group against the "bad" eating pattern from society; rather, we prefer to address the issue of educating adolescents so they may form their own eating patterns and become increasingly more independent in their food choices.

The data presented show a relationship with food that was defined by mere consumption: young people rarely purchase food; they do not think about it; and they do not know its char-

acteristics. This also contributes to their fear of food related risks. Consequently, they entrust their families with the responsibility for ensuring food quality.

It follows, then, that the criteria for food quality that prevail are sensory pleasure and familiarity, while other indicators of the same quality requiring greater knowledge and independence are of less consequence.

Young people put off to the future their responsibility for food choice, and therefore, postpone the need to gather knowledge and information which make it possible to identify "good" food. In the age considered in the survey, the family is entrusted with the decisions and choices and the young people are relieved of them.

While family models are, at least in part, a point of reference for the interviewees' choice of food, other points of reference are missing. A lack of the basic knowledge of food in terms of its characteristics and properties, for example, may make them vulnerable to marketing and advertising or to health fanatics or ethical messages from society and culture.

Thus, although the family and family intervention play a positive role in modelling diet and eating habits which, despite their imbalances, do not hand children over to "junk food", the survey suggests there needs to be greater food education among the very young. A strong basis of knowledge and information will enable them to innovate family and local traditions without surrendering to the latest trends and marketing and help to create informed consumers able to assess and choose a healthy diet.

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